abcam

ab284763

Anti-Pax2 antibody [EP3251] - BSA and Azide free

Recombinant | RabMAb

Key facts

Isotype	IgG
Host species	Rabbit
Storage buffer	pH: 7.2 - 7.4 Constituents: PBS
Form	Liquid
Clonality	Monoclonal
Immunogen	The exact immunogen used to generate this antibody is proprietary information.
Carrier free	Yes
Clone number	EP3251
Purification technique	Affinity purification Protein A
Concentration	1.068 mg/mL The concentration of this product may be batch-dependent Batch concentration finder →

Reactivity data

WB

Tested

Species	Transfected cell lysate - Human
Dilution info	-
Notes	-

Expected

Species	Mouse, Human, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

IHC-P

Tested

Species	Mouse
Dilution info	-
Notes	We recommend adjusting antibody dilutions according to your IHC staining protocol.

Species	Human
Dilution info	-
Notes	We recommend adjusting antibody dilutions according to your IHC staining protocol.

Species	Rat
Dilution info	-
Notes	We recommend adjusting antibody dilutions according to your IHC staining protocol.

Not recommended

Species	Transfected cell lysate - Human
Dilution info	-
Notes	-

ICC/IF

Tested

Species	Human
Dilution info	-

Notes	-

Expected

Species	Mouse, Rat
Dilution info	Use at an assay dependent concentration.
Notes	-

Not recommended

Species	Transfected cell lysate - Human
Dilution info	-
Notes	-

Flow Cyt (Intra)

Tested

Species	Human
Dilution info	-
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Expected

Species	Mouse
Dilution info	-
Notes	-

Species	Rat
Dilution info	-
Notes	ab172730 - Rabbit monoclonal IgG, is suitable for use as an isotype control with this antibody.

Not recommended

Species	Transfected cell lysate - Human

Dilution info	-
Notes	-

Target data

See full target information PAX2

Function	Transcription factor that may have a role in kidney cell differentiation (PubMed:24676634). Has a critical role in the development of the urogenital tract, the eyes, and the CNS.

Storage

Shipped at conditions	Blue Ice
Appropriate short-term storage conditions	+4°C
Appropriate long-term storage conditions	+4°C

Notes

ab284763 is the carrier-free version of ab79389

Patented technology

Our RabMAb® technology is a patented hybridoma-based technology for making rabbit monoclonal antibodies. For details on our patents, please refer to RabMAb® patents.

Conjugation ready

Our carrier-free antibodies are typically supplied in a PBS-only formulation, purified and free of BSA, sodium azide and glycerol. This conjugation-ready format is designed for use with fluorochromes, metal isotopes, oligonucleotides, and enzymes, which makes them ideal for antibody labelling, functional and cell-based assays, flow-based assays (e.g. mass cytometry) and Multiplex Imaging applications.

Use our conjugation kits for antibody conjugates that are ready-to-use in as little as 20 minutes with 1 minute hands-on-time and 100% antibody recovery: available for fluorescent dyes, HRP, biotin and gold.

Compatibility

This product is compatible with the Maxpar® Antibody Labeling Kit from Fluidigm, without the need for antibody preparation. Maxpar® is a trademark of Fluidigm Canada Inc.

Supplementary info

This supplementary information is collated from multiple sources and compiled automatically.

Activity summary	The Pax2 protein also known as Paired Box 2 is a transcription factor with a mass of approximately 47 kDa. It plays an important role in controlling gene expression during embryonic development. Researchers have identified Pax2 expression in the developing central nervous system kidneys and eyes. Pax2 contains a paired domain which enables it to bind to specific DNA sequences and regulate the transcription of target genes by recruiting other proteins and co-factors to chromatin.
Biological function summary	This transcription factor acts as a mediator in developmental processes influencing both organogenesis and tissue differentiation. Pax2 forms part of a transcriptional complex with other Pax family members such as Pax5 and Pax8 which together ensure the proper development of organs like the kidneys and eyes. These interactions allow Pax2 to control cell proliferation differentiation and survival in developing tissues thereby facilitating normal organ formation.
Pathways	Pax2 functions within the Wnt/β-catenin and Sonic Hedgehog signaling pathways. These pathways are important for the regulation of cell fate and patterning during embryogenesis. Pax2 works closely with proteins such as Wnt1 and Gli1 to transduce signals that instruct the development of specific tissues. Pax2's involvement in these pathways demonstrates its critical role in responding to environmental cues that dictate developmental progression.
Associated diseases and disorders	Pax2 disruption is associated with renal coloboma syndrome and optic nerve coloboma. Mutations in the Pax2 gene can lead to defective kidney development and neurological defects in eye formation due to impaired gene regulation. Pax2 interacts with proteins like WT1 in kidney development where imbalances may contribute to disease phenotypes. Understanding Pax2's connection to these disorders could help in developing targeted therapeutic strategies.

Product promise

Tested

We have tested this species and application combination and it works. It is covered by our product promise.

Expected

We have not tested this specific species and application combination in-house, but expect it will work. It is covered by our product promise.

Predicted

This species and application combination has not been tested, but we predict it will work based on strong homology. However, this combination is not covered by our product promise.

Not recommended

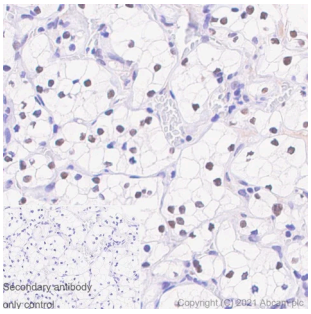
We do not recommend this combination. It is not covered by our product promise.

We are dedicated to supporting your work with high quality reagents and we are here for you every step of the way should you need us.

In the unlikely event of one of our products not working as expected, you are covered by our product promise.

Full details and terms and conditions can be found here:
Terms & Conditions.

9 product images

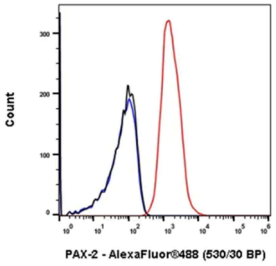


Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Pax2 antibody [EP3251] - BSA and Azide free (ab284763)

Pax2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of Human renal cancer using rabbit Anti-Pax2 antibody

This data was developed using ab79389, the same antibody clone in a different buffer formulation. Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human renal cancer tissue labelling Pax2 with ab79389 at 1/100 dilution. Positive staining on human renal cancer. The section was incubated with ab79389 for 30 minutes at room temperature. Slides were incubated with 3% Hydrogen Peroxide for 10 mins at room temperature after secondary antibody incubation to reduce the background. The immunostaining was performed on a Leica Biosystems BOND® RX instrument. A Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as the secondary antibody (Ready-to-use). Counterstained with hematoxylin. Negative control using PBS instead of primary antibody.

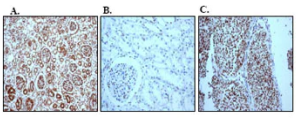
Heat mediated antigen retrieval with Tris-EDTA buffer (pH 9.0, epitope retrieval solution 2) for 20 mins.



Flow Cytometry (Intracellular) - Anti-Pax2 antibody [EP3251] - BSA and Azide free (ab284763)

Pax2 Flow Cytometry (Intracellular) staining using rabbit Anti-Pax2 antibody

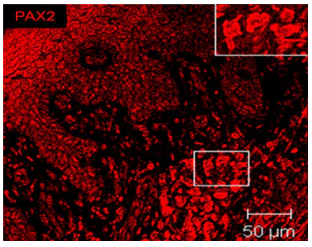
This data was developed using ab79389, the same antibody clone in a different buffer formulation. Intracellular Flow Cytometry analysis of K-562 (Human chronic myelogenous leukemia lymphoblast) labelling Pax2 with ab79389 at 1/30. Cells were fixed with 4% paraformaldehyde and permeabilised with 90% methanol. Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) at 1/2000 was used as the secondary antibody (red). Rabbit monoclonal IgG (ab172730) was used as the isotype control (black). Blue - Unlabelled control, cells without incubation with primary and secondary antibodies.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Pax2 antibody [EP3251] - BSA and Azide free (ab284763)

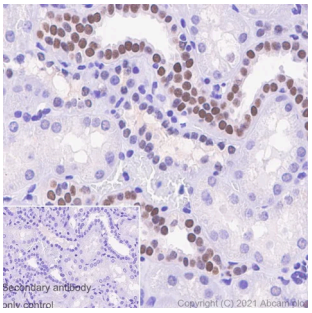
Pax2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Pax2 antibody

This data was developed using ab79389, the same antibody clone in a different buffer formulation.Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of (A) human fetal kidney, (B) human normal kidney and (C) human renal cell carcinoma tissues labelled Pax2 with unpurified ab79389 at a dilution of 1/1000.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Pax2 antibody [EP3251] - BSA and Azide free (ab284763)

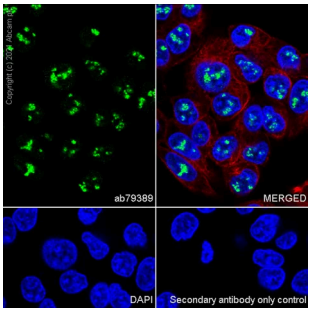
This data was developed using ab79389, the same antibody clone in a different buffer formulation.Immunohistochemical analysis of Human malignant melanoma tissue, staining Pax2 with unpurified ab79389.
Antigen retrieval was performed via heat mediation in a citrate buffer (pH 6). Sections were blocked with 0.1% Triton X-100/PBS containing 1% BSA and 10% horse serum for 1 hour. Samples were incubated with primary antibody overnight at 4°C. A Cy3®-conjugated goat anti-rabbit IgG was used as the secondary antibody.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Pax2 antibody [EP3251] - BSA and Azide free (ab284763)

Pax2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining of human kidney tissue using rabbit Anti-Pax2 antibody

This data was developed using ab79389, the same antibody clone in a different buffer formulation. Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of human kidney tissue labelling Pax2 with ab79389 at 1/100 dilution. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. A Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as the secondary antibody (Ready-to-use). Negative control using PBS instead of primary antibody. Counterstained with hematoxylin. Positive staining on human kidney . The section was incubated with ab79389 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument.

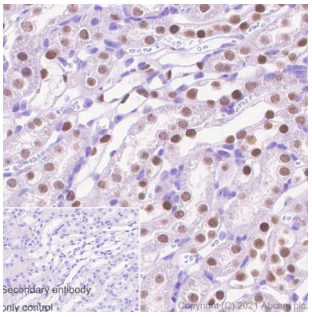


Immunocytochemistry/ Immunofluorescence - Anti-Pax2 antibody [EP3251] - BSA and Azide free (ab284763)

Pax2 Immunocytochemistry/ Immunofluorescence staining of HepG2 (human hepatocellular carcinoma epithelial cell) using rabbit Anti-Pax2 antibody

This data was developed using ab79389, the same antibody clone in a different buffer formulation. Immunocytochemistry analysis of HepG2 (human hepatocellular carcinoma epithelial cell) labelling Pax2 with ab79389 at 1/200 dilution. Cells were fixed with 4% paraformaldehyde and permeabilized with 0.1% Triton X-100 at room temperature for 4 minutes. Goat Anti-Rabbit IgG H&L (Alexa Fluor® 488) (ab150077) at 1/1000 was used as the secondary antibody (green). Cells

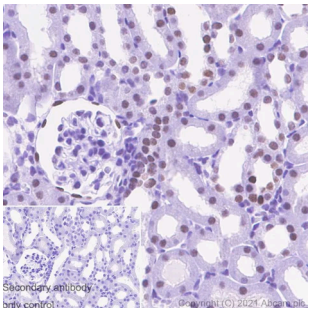
were counterstained with Anti-alpha Tubulin antibody [DM1A] - Microtubule Marker (Alexa Fluor® 594) (ab195889) at 1/200 dilution (red). Nuclear DNA was labelled with DAPI (blue). Confocal image showing nucleolar staining in HepG2 cell line.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Pax2 antibody [EP3251] - BSA and Azide free (ab284763)

Pax2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Pax2 antibody

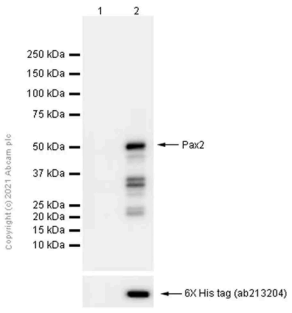
This data was developed using ab79389, the same antibody clone in a different buffer formulation. Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of mouse kidney tissue labelling Pax2 with ab79389 at 1/100 dilution. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. A Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as the secondary antibody (Ready-to-use). Negative control using PBS instead of primary antibody. Counterstained with hematoxylin. Positive staining on mouse kidney. The section was incubated with ab79389 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument.



Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) - Anti-Pax2 antibody [EP3251] - BSA and Azide free (ab284763)

Pax2 Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) staining using rabbit Anti-Pax2 antibody

This data was developed using ab79389, the same antibody clone in a different buffer formulation. Immunohistochemistry (Formalin/PFA-fixed paraffin-embedded sections) analysis of rat kidney tissue labelling Pax2 with ab79389 at 1/100 dilution. Heat mediated antigen retrieval was performed using Tris/EDTA buffer pH 9. A Rabbit specific IHC polymer detection kit HRP/DAB (ab209101) was used as the secondary antibody (Ready-to-use). Negative control using PBS instead of primary antibody. Counterstained with hematoxylin. Positive staining on rat kidney tissue. The section was incubated with ab79389 for 30 mins at room temperature. The immunostaining was performed on a Leica Biosystems BOND® RX instrument.



Western blot - Anti-Pax2 antibody [EP3251] - BSA and Azide free (ab284763)

This data was developed using ab79389, the same antibody clone in a different buffer formulation.
All lanes:
Western blot - Anti-Pax2 antibody [EP3251] (ab79389) at 1/10000 dilution

Lane 1:
HEK-293 (Human embryonic kidney epithelial cell) transfected with empty vector whole cell lysate at 15 µg

Lane 2:
HEK-293 (Human embryonic kidney epithelial cell) transfected with his tagged human full-length PAX2 at 15 µg

Secondary

All lanes:
Western blot - Goat Anti-Rabbit IgG H&L (HRP) (ab97051) at 1/20000 dilution

Predicted band size: 45 kDa

Please note: All products are 'FOR RESEARCH USE ONLY. NOT FOR USE IN DIAGNOSTIC OR THERAPEUTIC PROCEDURES'.